Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1)-2) Cancelled without disclaimer or prejudice.

3) (Currently Amended) A method as claimed in ~~claim 7~~claim 7, characterized in that heating means associated with pipe are used to raise the temperature of the petroleum fluids above the dissociation temperature.

4) (Currently Amended) A method as claimed in ~~claim 8~~claim 3, characterized in that, pipe being included with at least a second pipe in a tube isolated from the outside medium, second pipe is used for circulation of a warm fluid.

5) (Currently Amended) A method as claimed in ~~claim 7~~claim 7, characterized in that hydrate inhibitors are injected into pipe under the control of control device .

6) (Previously Presented) A method for continuous detection, at any point of a pipe carrying a multiphase mixture of petroleum fluids, using a mechanistic hydrodynamic module and an integrated compositional thermodynamic module to define the phase properties, and applying mass conservation and momentum conservation equations, as well as equations of

energy transfer in the mixture, considering that the multiphase mixture is substantially continuously at equilibrium, a composition of the multiphase mixture is variable all along the pipe and a mass of each constituent of the mixture is globally defined by a mass conservation equation regardless of phase state thereof, and the petroleum fluids are lumped together into a limited number of pseudo-components, comprising detecting thermodynamic hydrate formation conditions by :

carrying out a lumping of the petroleum fluids into selected pseudo-components so as to isolate the hydrate forming components, with a definition for each pseudo-component of a mass fraction and of a number of characteristic physical quantities, and

applying to said modules data relative to the selected pseudo-components so as to determine at any point a hydrate dissociation temperature.

7) (Previously Presented) A method for continuous control of hydrate formation at any point of a pipe carrying a multiphase mixture of petroleum fluids, using a mechanistic hydrodynamic module and an integrated compositional thermodynamic module to define the phase properties, and applying mass conservation and momentum conservation equations, as well as equations of energy transfer in the mixture, considering that the multiphase mixture is substantially continuously at equilibrium, a composition of the multiphase mixture is variable all along the pipe and a mass of each constituent of the multiphase mixture is globally defined by a mass conservation equation regardless of its phase state thereof, and the petroleum

fluids are grouped together into a limited number of pseudo-components, comprising:

a) detecting hydrate formation conditions by :

carrying out a grouping of the petroleum fluids into selected pseudo-components so as to isolate the hydrate forming components, with a definition for each pseudo-component of a mass fraction and of a number of characteristic physical quantities, and

by applying to said modules data relative to these particular pseudo-components so as to determine a hydrate dissociation temperature;

b) a control device to compare temperature of the petroleum fluids with the hydrate dissociation temperature; and

c) applying measures intended to fight hydrate formation under the control device.